

REMARKS

Applicants appreciate the Examiner's thorough examination of the subject application and request reconsideration of the subject application based on the foregoing amendments and the following remarks.

Claims 1-15 and 17-66 are pending in the subject application. Claim 16 was previously canceled.

Claims 1-15, 17-50 and 55-56 stand rejected under 35 U.S.C. §102 and/or 35 U.S.C. §103.

Claims 1, 2, 29, 49, 51-54, 57, 59, and 61 are amended herein as suggested by the Examiner.

The amendments to the claims are supported by the originally filed disclosure and no new matter has been added by virtue of the amendments..

35 U.S.C. §102 REJECTIONS

The Examiner rejected claims 1-5, 7, 9-15, 17-20, 22-23, 25-26, 28-38, 40-42, 44-45, 47-50 and 55-56 under 35 U.S.C. §102(b) as being anticipated by Cai et al., “Parametrical Modeling Based Multi-Layered Approach for Design and Validation of Catheterization Devices” [hereinafter “Cai”]. Applicants respectfully traverse as discussed below.

With regard to claims 1-5, 7, 9-15, 17-20, 22-23, 25-26, and 28, Cai fails to show at least two elements.

First, Cai fails to show a method for providing data relating to a three-dimensional model of a body cavity or lumen of the patient for which the patient-specific medical device is being designed. While Cai shows parametric methods of catheter validation, Cai only shows validation in a “virtual human vasculature.” Cai at 33, col. 2. Nowhere discloses a method of creating “patient-specific” medical devices as in claim 1.

Second, Cai fails to show a knowledge base. Currently amended Claim 1 recites a “device shape knowledge base comprising a plurality of geometries for at least one segment of a device and rules for determining correspondence between a geometry of at least one segment and at least a portion of the model of the body cavity or lumen.” In contrast, to the extent that Cai discloses techniques for designing catheters, Cai discloses design by navigation, rather than through the use of a knowledge base as in claim 1. *See id.*

With regard to claims 29-38, 40-42, 44-45, and 47-50, and 55-56, Cai fails to show a system containing rules for determining correspondence between a geometry and a model. More particularly, Cai fails to show a rule containing “a statement associated with a certainty factor” as recited in currently amended claims 29 and 49.

It is respectfully submitted that for the foregoing reasons, claims 1-5, 7, 9-15, 17-20, 22-23, 25-26, 28-38, 40-42, 44-45, 47-50 and 55-56 are patentable over the cited reference and thus, satisfy the requirements of 35 U.S.C. §102(b). As such, these claims, including the claims dependent there from are allowable.

35 U.S.C. §103 REJECTIONS

Claims 6, 8, 21, 24, 27, 39, 43 and 46 stand rejected under 35 U.S.C. § 103 as being unpatentable over Cai in view of James Anderson, et al., Virtual Reality in Interventional Radiology [hereinafter “Anderson”] for claims 6 and 39; in view of U.S. Patent 6,205,411 to DiGioia et al; [hereinafter “DiGioia”] for claims 8, 21, 24 and 43; or U.S. Patent 4,918,620 to Ulug [hereinafter “Ulug”] for claims 27 and 46. Applicants respectfully traverse these rejections.

As indicated in the discussion above regarding the cited Cai et al. article, Cai does not disclose, teach nor suggest the inventions set forth in either claim 1 or claim 29 of the present invention. None of the other cited references cite the draft of the Cai disclosure to render the claims obvious.

Each of claims 6, 8, 21, 24, 27, 39, 43 and 46 depend respectfully from one of claims 1 or 29. As such, at least because of the dependency from base claim that is believed to be allowable, each of claims 6, 8, 21, 24, 27, 39, 43 and 46 are considered to be allowable.

Applicants note that each of the secondary references is being cited as providing a teaching or a suggestion directed to the specific feature of the dependent claim being rejected. As such, it is respectfully submitted that the combination of the primary or principal reference with any of the cited secondary references fails to overcome the deficiencies in the primary reference provided in the §102 discussion provided above. Applicants would note that the foregoing remarks distinguishing claims 6, 8, 21, 24, 27, 39, 43 and 46 shall not be construed as an admission that these claims are not separately patentable over the cited combination of references.

As to the secondary references, Applicants make the following observations. Anderson DiGioia and Ulug do not contain or imply any "intelligence", *e.g.*, capability of making inference. DiGioia describes a computer assisted surgery planner and intra-operative guidance system. Ulug is directed to generic computer software architecture and operating system but includes neither discussion nor teaching as to a medical diagnosis expert system or a system for design medical devices.

It is respectfully submitted that for the foregoing reasons, claims 6, 8, 21, 24, 27, 39, 43 and 46 are patentable over the cited reference(s) and thus, satisfy the requirements of 35 U.S.C. §103(a). As such, these claims are allowable.

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It is respectfully submitted that the subject application is in a condition for allowance.
Early and favorable action is requested.

If for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, the Commissioner is hereby authorized and requested to charge Deposit Account No.

04-1105.

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Respectfully submitted,

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